

## ABSTRACT

A coil (50) is placed adjacent to a semiconductor  
5 wafer (10). An AC excitation current is used to create a  
changing electromagnetic field (60) in the wafer (10). The  
wafer is heated by a heat source (20) and the conductivity  
of the wafer (10) will change as a function of the wafer  
temperature. Induced eddy currents will cause the  
10 inductance of the coil (50) to change and the temperature  
of the wafer (10) can be determined by monitoring the  
inductance of the coil (50).